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P423 -Primary Renal Lymphoma: An Unusual Cause of Bilateral Nephromegaly

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Introduction
Primary renal lymphoma is a rare disease, which account for only 0.7% of all extra-nodal lymphoma in North America [1]. Amongst the 70 cases reported in the literature to date, it was often reported as unilateral renal involvement in adults [2]. We describe a case of primary renal diffuse large B-cell lymphoma, presenting with acute kidney injury (AKI) and bilateral nephromegaly.

Case description
A 63 year-old female was admitted with two weeks history of vomiting, legs swelling and weight loss. She has bilateral ballotable kidneys on examination. Initial blood tests showed stage 3 AKI (serum urea: 45.7 mmol/L, creatinine 828 µmol/L) and pancytopenia. Haemolytic, clotting, virology and haematinic screens were unremarkable. Her lactate dehydrogenase was 341 U/L. She had nephrotic syndrome with serum albumin of 27 g/L and random urine protein-creatinine ratio of 413 mg/mmol. Her kappa/lambda ratio was normal with mildly low IgG (5.57 g/L). Ultrasound scan reported bilateral enlarged kidneys (right 14.0cm, left 14.6cm) and homogenous appearance of cortex and medulla. She was started on haemodialysis. Renal biopsy was performed, which showed renal tissue with scattered tubules extensively infiltrated by medium-sized blastoid cells. Bone marrow aspirate showed only slight hypocellularity. Immunophenotyping of the renal biopsy found a diffuse large B-cell lymphoma. She received oral dexamethasone and rasburicase, followed by first cycle of CHOP regime with 50% reduction of cyclophosphamide.

Outcomes:
She had further readmission with pulmonary oedema and hyperkalaemia, which required increased haemodialysis and ultrafiltration. There was no evidence of myocardial infarction, however, the echocardiogram reported severely impaired systolic function, with an ejection fraction of 25%. Her chemotherapy regime therefore was altered to R-CEOP. In addition, she noted blurred vision following the second cycle of chemotherapy. Though CT and MRI head were unremarkable, cerebrospinal fluid flow cytometry showed evidence of lymphoma infiltration. She was therefore commenced on intra-thecal methotrexate. She has had good response to chemotherapy and no longer required haemodialysis after nine months of treatment. Her current eGFR is 20 ml/min/1.73m2.

Discussion:
Although primary renal lymphoma is a rare condition, it must be considered in the differential diagnosis of nephromegaly and AKI. Renal biopsy is key in establishing diagnosis and partial recovery of renal function is achievable.

Figure: Renal biopsy findings. A, B: Tubules infiltrated by lymphomatous cells (H&E, x4 and x20 magnification). C: CD20 staining DLBCL cells (x40 magnification). D: CMYC staining 50% of DLBCL cells (x40 magnification).